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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte LAURENCE C. MUDGE

Appeal 2010-011847
Reissue Application 10/849,509
Patent 5,599,804
Technology Center 1600

Before CAROL A. SPIEGEL, DEMETRA J. MILLS, and
LORA M. GREEN, *Administrative Patent Judges*.

MILLS, *Administrative Patent Judge*.

DECISION ON APPEAL¹

This is an appeal under 35 U.S.C. § 134. The Examiner has rejected the claims for obviousness. We have jurisdiction under 35 U.S.C. § 6(b).

¹ The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the “MAIL DATE” (paper delivery mode) or the “NOTIFICATION DATE” (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

STATEMENT OF THE CASE

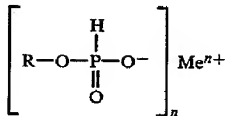
This is a reissue application for U.S. Patent 5,599,804, *Fungicidal Compositions for the Enhancement of Turf Quality*. According to Appellant, the patent claims were amended three times during this reissue application:

- (i) initially, to expressly exclude the fungicide "mancozeb" from all of the method and composition claims, to cancel originally issued claim 9, and to add new claims 24-38;
- (ii) then, to replace "comprises" with "consists essentially of" in independent composition claims 10 and 23; and,
- (iii) finally, to replace the prior exclusion of "mancozeb" with the broader class of "an ethylenebisdithiocarbamate contact fungicide" (App. Br. 2).

Independent claim 1 contains the broadest description in the claims of the active agents and reads as follows:

1. A method of combatting fungi and enhancing turf quality in turfgrass which comprises applying to said turfgrass synergistic fungicidally effective amounts of:

- (a) a first active agent selected from the group consisting of 1 part by weight of
 - (i) a monoester salt of a phosphorous acid of Formula (I):



wherein:

R is an alkyl radical having 2 to 4 carbon atoms,

Me is an alkali metal, alkaline earth, or aluminum atom,
and
n is a whole number from 1 to 3 equal to the valence of
Me; and
(ii) phosphorous acid or an alkali or alkali earth metal
salt thereof; and
(b) from 0.01 to 0.1 parts by weight of a phthalocyanine
compound,
wherein said method does not include the application of an
ethylenebisdithiocarbamate contact fungicide.

Cited References

The Examiner relies on the following prior art references:

Lucas	US 5,336,661	Aug. 9, 1994
Collins	US 5,206,228	Apr. 27, 1993
Kato et al.	JP 02138376	May 28, 1990
Nagashima et al.	JP 03221576	Sep. 30, 1991

Gullino et al., *Chemical Control of Dollar Spot and Brown Patch of Turfgrass in Italy*, Med. Fac Landhouww Univ., Gent 60/2b (1995).

Rohm and Haas, <http://www2.siri.org/msds/f2/bzz/bzzsc.html>, for ingredients in Rohm and Haas Co.'s FORE TM. FUNGICIDE, 62440 (1991).

Fenn et al., *Studies on the In Vitro and In Vivo Antifungal Activity of Fosetyl-Al and Phosphorous Acid*, 74(5) Phytopathology, The American Phytopathological Society, 606-611 (1994).

Grounds of Rejection

1. Claims 1-8, 10-17, 20-35, 37 and 38 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lucas, Rohm and Haas in view of Collins.
2. Claims 1-8, 10-17, 20-35, 37 and 38 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Gullino, Fenn, Kato and Nagashima.

FINDINGS OF FACT

The findings of fact relevant to all rejections are set forth below.

1. “Lucas teaches (see examples 1-8) using on turfgrass fungicidal treatment formulations comprising:

a. 1 part by weigh of certain monoester salts of phosphorous acid, for example fosetyl-Al (preferably Aliette.TM.) and

b. 1.5 to 2.5 parts by weigh of mancozeb (preferably FORE.TM.).

The FORE.TM. brand of mancozeb contains 70% mancozeb and 1-2% of copper phthalocyanato(2-) which is a phthalocyanine compound also known as Pigment Blue 15. See <http://www2.siri.org/msds/f2/bzz/bzzsc.html>, for ingredients in Rohm and Haas Co.'s FORE.TM. FUNGICIDE, 62440.

Accordingly, Lucas teaches turfgrass formulations comprising:

a. 1 part of certain monoester salts of phosphorous acid, for example fosetyl-Al (preferably Aliette.TM.) and

b. 1.5 to 2.5 parts of mancozeb (preferably FORE.TM.) and

c. < 1 part by weight of Pigment Blue 15 as the phthalocyanine compound.”

(Ans. 4.)

2. “The Lucas ALIETTE and FORE formulations comprising the above ingredients realized significant improvements in turf color as compared to other Mancozeb containing formulations lacking Pigment Blue 15. See col. 5-6.” (*Id.*)

3. “Lucas further teaches the use of its compositions as 'wetable powders' (as in instant claim 21 and 38) and 'aqueous suspensions' (as in instant claims 20 and 37). See Lucas col. 3.” (*Id.*)

4. “The Lucas reference composition and method differs from the instant claims insofar that it fails to teach:

a. the substitution of the anti-fungal agent mancozeb with a different antifungal agent such as phosphorous acid or alkali/alkaline earth metal salt thereof (for all the instant claims)[.] In this regard, it is noted that mancozeb is an ethylenebisdithiocarbamate fungicide excluded from the instant claims;

b. the substitution of Pigment Blue 15 with a different phthalocyanine compound (only instant claims 4, 17, 27 and 35).” (Ans. 4-5.)

5. “Collins teach the anti-fungal use of BOTH monoester salts of phosphorous acid AND phosphorous acid or alkali/alkaline earth metal salt thereof for the added benefit of controlling arthropod pests when applied to plants including turf. See Abstract; patent claims 1-18, including claim 9 drawn to turf; and col. 10. Collins additionally teaches, interchangeably, the further incorporation of various colorants into its plant treatment formulations including metal phthalocyanine dyestuffs. See col. 12, especially lines 10-22.” (*Id.* at 5.)

6. The Examiner concludes that,

one of ordinary skill in the art at the time of applicant's invention would have been motivated to modify the Lucas reference turf treating composition containing mancozeb to substitute the Collins reference phosphorous acid or alkali/alkaline earth metal salt since they both possess analogous anti-fungal activities with the added benefit of increase pesticide resistance found in the Collins phosphorous acid or alkali/alkaline earth metal salt fungicide.

Additionally, Collins provides motivation to one of ordinary skill in the art to substitute one functionally equivalent phthalocyanine compound for another i.e. substitute the use of Pigment Blue 15 with a different phthalocyanine dye compound. (*Id.*)

7. The Examiner further concludes that

it would have been prima facie obvious to one of ordinary skill in the art at the time of filing of the instant claimed invention to substitute the Lucas' mancozeb fungicide with the Collins phosphorous acid or alkali/alkaline earth metal salt thereof fungicide for added pesticide resistance as taught by Collins and where necessary substitute a different phthalocyanine dye for Pigment Blue 15 in the Lucas composition to attain analogous colorant properties as taught by Collins. (Ans. 5-6.)

8. Table 2 of the Specification, at columns 9 and 10, is said to show results using Aliette alone (Example 6) compared to Aliette plus phthalocyanine dye (Example 9 Exp 10622) and to show better results obtained with Example 9 evidencing fungicidal synergism.

Discussion

1. Claims 1-8, 10-17, 20-35, 37 and 38 are rejected under 35 U.S.C. §103(a) as being unpatentable over Lucas, Rohm and Haas in view of Collins.
2. Claims 1-8, 10-17, 20-35, 37 and 38 are rejected under 35 U.S.C. §103(a) as being unpatentable over Gullino, Fenn, Kato and Nagashima.

ISSUE

The Examiner concludes that “it would have been prima facie obvious to one of ordinary skill in the art at the time of filing of the instant claimed invention to substitute the Lucas' mancozeb fungicide with the Collins phosphorous acid or alkali/alkaline earth metal salt thereof fungicide for added pesticide resistance as taught by Collins and where necessary

substitute a different phthalocyanine dye for Pigment Blue 15 in the Lucas composition to attain analogous colorant properties as taught by Collins.” (Ans. 5-6.)

Appellant argues that the methods in all the claims “comprises applying to said turfgrass synergistic fungicidally effective amounts” of two active agents.² (App. Br. 3.) Appellant argues that “the phthalocyanine functions to synergize or enhance the effectiveness of the fungicide” (App. Br. 12) and that the Examiner ignored or gave no weight to the term “synergistic” fungicidally effective amounts in the claim. (See Ans. 8.)

The issue is: Does the cited prior art teach “synergistic fungicidally effective amounts” of a first active agent and a phthalocyanine compound as claimed.

PRINCIPLES OF LAW

“In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness. Only if that burden is met, does the burden of coming forward with evidence or argument shift to the applicant.” *In re Rijckaert*, 9 F.3d 1531, 1532 (Fed. Cir. 1993) (citations omitted). In order to determine whether a *prima facie* case of obviousness has been established, we consider the factors set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966): (1) the scope and content of the prior art; (2) the differences between the prior art and the claims at issue; (3) the level of ordinary skill in the relevant art; and (4) objective

² There were two Appeal Briefs submitted by the Appellant, we reference the later Appeal Brief dated May 11, 2010.

evidence of nonobviousness, if present. All claim limitations must be considered. *In re Royka*, 490 F.2d 981, 985 (CCPA 1974). "By its terms, a 'synergistically effective amount' is a functional limitation." *Geneva Pharms., Inc. v. GlaxoSmithKline, PLC*, 349 F.3d 1373, 1384 (Fed. Cir. 2003).

ANALYSIS

Lucas teaches the combination of Aliette™ and FORE™, wherein FORE™ is a combination of Mancozeb and Pigment Blue 15. The Examiner finds that Collins teaches the incorporation of various colorants into plant treatment formulations. (*See* Ans. 5.) The Examiner concludes that Collins provides motivation to one of ordinary skill in the art to substitute one functionally equivalent phthalocyanine compound for another i.e., to substitute the use of Pigment Blue 15 with a different phthalocyanine dye compound. (*Id.*)

Appellant contends that Collins "does not report any instance in which ALIETTE™ or any other phosphorous acid derivative was actually combined with a phthalocyanine compound in the treatment of fungal diseases" (App. Br. 20). Appellant further argues that Collins "lists phthalocyanine among a broad list of many classes of colorants with no stated preference for a phthalocyanine." (*Id.* at 21.)

Appellants argue that Table 2 of the Specification, at columns 9 and 10, shows results using Aliette alone (Example 6) compared to Aliette plus phthalocyanine dye (Example 9 Exp 10622) and shows better results obtained with the product of Example 9 evidencing fungicidal synergism.

We conclude based on the record before us that the cited prior art does not disclose a "synergistic fungicidal effective" amount of a composition

comprising a phosphorus acid and or a fungicidal effective amount of a phthalocyanine dye in the absence of ethylenebisdithiocarbamate contact fungicide. Collins teaches phthalocyanine compounds which act as colorants and does not disclose any fungicidal function associated with phthalocyanines or any synergistic result association with such a combination. Hence, the Examiner has not considered all claim limitations. *In re Royka*, 490 F.2d 981, 985

CONCLUSION OF LAW

The cited references do not disclose a synergistic fungicidally effective amount of a first active agent and a phthalocyanine compound as claimed. The obviousness rejection is reversed.

Discussion

2. Claims 1-8, 10-17, 20-35, 37 and 38 are rejected under 35 U.S.C. §103(a) as being unpatentable over Gullino, Fenn, Kato and Nagashima.

FINDINGS OF FACT

8. Gullino et al. teach that the fungus *Rhizotonia solani* causes brown patches in turfgrass, such as, bentgrass and bermudagrass. (*See* pg. 367 “SUMMARY” & pp. 368-369 “RESULTS”).
9. “Gullino et al. do not teach that the phosphorus compounds in claims 1, 10-14, 22-25, 31 and 32 are used to combat *Rhizotonia solani* in turfgrass.” (Ans. 15.)
10. “Fenn et al. teach that phosphorous acid and fosetyl-Al are fungicides used to control *Rhizotonia solani* (pages 609-610 discussion section). It

would have been obvious to apply phosphorous acid or fosetyl-A1 to the turfgrass recited in claims 1,6,7,29,30 to kill *Rhizotonia solani*.” (*Id.*)

11. “Neither Gullino et al. nor Fenn et al. teach the use of a phthalocyanine compound such as pigment blue 15 listed in claims 2-5,8,10,15-17,22-28,31-35.” (*Id.*)

12. “Kato et al. teach that green dye can be applied to brown dead lawn areas in golf courses (turfgrass) to restore the desired green appearance to golf courses (page 2).” (*Id.*)

13. Nagashima et al. teach that a pigment blue 15 colorant can be added to dead grass to restore the color of grass (pages 8-9).” (*Id.*)

14. The Examiner concludes that

[i]t would have been obvious to one having ordinary skill in the art to add pigment blue 15 to phosphorous acid or fosetyl-A1. One would have been motivated to do this because while phosphorous acid or fosetyl-A1 would control/kill the fungus, *Rhizotonia solani*, responsible for causing brown or dead spots in the turfgrass (golf course), the pigment blue 15 would restore the desired green appearance to turfgrass. The combination of references excludes an ethylenebisdithiocarbamate contact fungicide recited in claims 1,10,24 and 32 which is a requirement of the present claims. (Ans. 15-16.)

15. “With respect to the instant amount of phthalocyanine and fosetyl-A1 or phosphorous acid,” the Examiner concludes that

one having ordinary skill in the art would have been able to determine the optimum amount of phthalocyanine and fosetyl-A1 or phosphorous acid. One would have been motivated to do this in order to make a composition that would have been

most effective in controlling fungal growth and restoring color without destroying the turfgrass. With respect to the physical form of the composition recited in claims 20, 21, 37 and 38, one would have expected all physical forms of the actives to be effective absent a showing of unexpected results. (*Id.* at 16.)

ISSUE

The Examiner concludes that “[i]t would have been obvious to one having ordinary skill in the art to add pigment blue 15 to phosphorous acid or fosetyl-Al. One would have been motivated to do this because while phosphorous acid or fosetyl-Al would control/kill the fungus, *Rhizotonia solani*, responsible for causing brown or dead spots in the turfgrass (golf course), the pigment blue 15 would restore the desired green appearance to turfgrass.” (Ans. 15-16.)

Appellant contends that the methods in all the claims “comprises applying to said turfgrass synergistic fungicidally effective amounts” of two active agents. (Br. 3.) Appellant argues that “the phthalocyanine functions to synergize or enhance the effectiveness of the fungicide” (App. Br. 12) and that the Examiner ignored or gave no weight to the term “synergistic” fungicidally effective amounts in the claim. (*See* Ans. 8.)

The issue is: Does the cited prior art teach “synergistic fungicidally effective amounts” of a first active agent and a phthalocyanine compound as claimed.

ANALYSIS

Appellant contends that the methods in all the claims “comprises applying to said turfgrass synergistic fungicidally effective amounts” of two

active agents. (Br. 3.) Appellant argues that “the phthalocyanine functions to synergize or enhance the effectiveness of the fungicide” (App. Br. 12) and that the Examiner ignored or gave no weight to the term “synergistic” fungicidally effective amounts in the claim. (*See* Ans. 8.)

Kato and Nagashima are relied on for their teaching that green dye or pigment Blue 15 can be applied to brown dead lawn areas in turfgrass to restore the desired green appearance. No synergistic activity is disclosed.

Appellant argues that Table 2 of the Specification, at columns 9 and 10, shows results using Aliette alone (Example 6) compared to Aliette plus phthalocyanine dye (Example 9 Exp 10622) and shows better results obtained with the product of Example 9 evidencing fungicidal synergism.

We conclude that the cited prior art does not disclose a synergistic fungicidal effective amount of a composition comprising a phosphorus acid and or a fungicidal effective amount of a phthalocyanine dye in the absence of ethylenebisdithiocarbamate contact fungicide. The cited prior art discloses coloring of turf grass but does not disclose that the coloring has a synergistic fungicidal effect in combination with a phosphorus acid, as claimed.

CONCLUSION OF LAW

The cited references do not disclose a synergistic fungicidally effective amount of a first active agent and a phthalocyanine compound as claimed. The obviousness rejection is reversed.

REVERSED

alw

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